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SEP 26 2008

Amendments to the Specification

Please amend the paragraph at page 1, lines 6-10, in the following manner:

~~The present invention~~ This disclosure generally relates to image processing methods and apparatuses, and more particularly to an image processing method for encoding and decoding image data in conformance with the JPEG2000, and an image processing apparatus which employs such an image processing method.

Please amend the paragraphs at page 5, line 12 through page 6, line 19, in the following manner:

DISCLOSURE OF THE INVENTION SUMMARY

~~It is a general object of the present invention to provide a novel and useful image processing method and an image processing apparatus, in which the problems described above are suppressed.~~

~~Another and more specific object of the present invention is to provide In an aspect of this disclosure, there are provided~~ an image processing method and an image processing apparatus, which realize by hardware, instead of the conventional software processing, a TAG information generator which generates the inclusion information of the packet header and a ZERO-TAG generator which generates the information related to the number of zero-bit-planes, and enable a real-time processing by immediately outputting a result in response to a data input, and to provide an image processing apparatus provided with a TAG information analyzing circuit and/or a ZERO-TAG information analyzing circuit which have a small circuit scale.

~~Still another object of the present invention is to provide In another aspect of this disclosure, an image processing method is provided~~ for generating TAG information based on inclusion information which indicates an existence of significant data in code blocks for each of sub-bands, according to JPEG2000 standard, comprising the steps of (a) accepting the inclusion information of the code blocks in a predetermined sequence in units of code blocks amounting to a number

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which is smaller than a number of code blocks of sub-bands in all levels; and (b) immediately generating and outputting TAG information corresponding to the accepted inclusion information. According to [[the]] such an image processing method ~~of the present invention~~, it is possible to eliminate the need for a work memory having a large memory capacity to store the inclusion information, which was otherwise required by the conventional software processing, and the TAG information can be generated by real-time processing.

Please amend the paragraphs at page 7, line 9 through page 8, line 18, in the following manner:

~~A further object of the present invention is to provide~~ In another aspect of this disclosure, an image processing method is provided for generating ZERO-TAG information based on data of numbers of zero-bit-planes in which all significant bits of code blocks in each of sub-bands are zero, according to JPEG2000 standard, comprising the steps of (a) accepting data of the numbers of zero-bit-planes in a predetermined sequence in units of code blocks amounting to a number which is smaller than a number of code blocks of sub-bands of all levels; and (b) immediately generating and outputting ZERO-TAG information corresponding to the accepted numbers of zero-bit-planes. According to the image processing method of the present invention, it is possible to eliminate the need for a work memory having a large memory capacity to store the data of the number of zero-bit-planes, which was otherwise required by the conventional software processing, and the ZERO-TAG information can be generated by real-time processing.

~~Another object of the present invention is to provide~~ In another aspect of this disclosure, there is provided an image processing apparatus comprising a TAG information analyzing circuit to generate TAG information based on inclusion information which indicates an existence of significant data in code blocks for each of sub-bands, according to JPEG2000 standard, the TAG information analyzing circuit accepting the inclusion information of the code blocks in a predetermined sequence in units of code blocks amounting to a number which is smaller than a number of code

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blocks of sub-bands in all levels, and immediately generating and outputting TAG information corresponding to the accepted inclusion information. According to the image processing apparatus of the present invention, it is possible to eliminate the need for a work memory having a large memory capacity to store the inclusion information, which was otherwise required by the conventional software processing, and the TAG information can be generated by real-time processing.

Please amend the paragraphs at page 9, line 10 through page 10, line 6, in the following manner:

~~Still another object of the present invention is to provide~~ In another aspect of this disclosure, there is provided an image processing apparatus comprising a ZERO-TAG information analyzing circuit to generate ZERO-TAG information based on data of numbers of zero-bit-planes in which all significant bits of code blocks in each of sub-bands are zero, according to JPEG2000 standard, the ZERO-TAG information analyzing circuit accepting data of the numbers of zero-bit-planes in a predetermined sequence in units of code blocks amounting to a number which is smaller than a number of code blocks of sub-bands of all levels, and immediately generating and outputting ZERO-TAG information corresponding to the accepted numbers of zero-bit-planes. According to the image processing apparatus of the present invention, it is possible to eliminate the need for a work memory having a large memory capacity to store the data of the number of zero-bit-planes, which was otherwise required by the conventional software processing, and the ZERO-TAG information can be generated by real-time processing.

Other objects aspects and further features of the present invention will be apparent from the following detailed description when read in conjunction with the accompanying drawings.